

$^7\text{Li}(\alpha,\gamma)$  res    1962Gr07,1967Pa19,1984Ha13

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, C. G. Sheu		NP A880, 88 (2012)	1-Jan-2011

1979An16:  $^7\text{Li}(\alpha,\gamma)$  E=0.96 MeV, measured  $E_\gamma$ ,  $I_\gamma$ (THETA), DSA.  $^{11}\text{B}$  levels deduced  $T_{1/2}$ .

1984Ha13:  $^7\text{Li}(\alpha,\gamma)$  E=401, 814, 953 keV, measured thick target  $\gamma$  yield,  $E_\gamma$ ,  $I_\gamma$ .  $^{11}\text{B}$  resonances deduced resonance  $\Gamma_\gamma$ ,  $\gamma$ - $\alpha$ ,  $\gamma$ -branching ratios.

1986Ce05:  $^7\text{Li}(\alpha,\gamma)$  E $\leq$ 3.7 MeV, analyzed reaction  $\sigma$ , other parameters. Deduced fast  $\alpha$ -particle confirmation In tokamak plasmas.

1987Bu18:  $^7\text{Li}(\alpha,\gamma)$  E=0.7-2 MeV, measured  $E_\gamma$ ,  $I_\gamma$ ,  $\sigma(\theta_\gamma)$ .

2004Gy02:  $^7\text{Li}(\alpha,\gamma)$ , E=810-820 keV; measured  $E_\gamma$ ,  $I_\gamma$ . Deduced absolute resonance strengths.

See branching ratios In (1962Gr07) and (1984Ha13).

 $^{11}\text{B}$  Levels

E(level)	$J^\pi$	$T_{1/2}$	Comments
0			
4.445 $\times 10^3$	5/2 $^-$		$J^\pi$ from (1962Gr07).
6.743 $\times 10^3$	7/2 $^-$		$J^\pi$ from (1962Gr07).
6.792 $\times 10^3$			
7286	5/2 $^+$		$J^\pi$ from Adopted Levels.
7978	3/2 $^+$		$J^\pi$ from Adopted Levels.
8920 2	5/2 $^-$	4.374 eV 23	$\Gamma_{\gamma 0}=4.15$ eV 2; $\Gamma_\alpha=5.9\times 10^{-3}$ eV 9 E(level): from $E_{\text{res}}=401$ keV 3 (1984Ha13), also see $E_{\text{res}}=401$ keV 1 from (1951Be13). $\Gamma$ : using $\Gamma_\gamma=4.368$ eV 21 from ref in (1984Ha13). Also see $\Gamma<1$ keV (1951Be13). $\omega\gamma=8.8\times 10^{-3}$ eV 14 (1984HA13).
9183. I	7/2 $^+$	1.8 eV +15-11	$\Gamma_\gamma=0.17$ eV +6-3; $\Gamma_\alpha=1.6$ eV +15-11 E(level): from $E_{\text{res}}=814$ keV 2 (1984Ha13), also see $E_{\text{res}}=819$ keV 1 from (1951Be13). $\Gamma$ : from (1984Ha13), also see $\Gamma<1$ keV (1951Be13). $\Gamma_\gamma$ from (1984Ha13). $\omega\gamma=0.310$ eV 47 (1984HA13).
9271. I	5/2 $^+$	4 keV	$\Gamma_{\gamma 0}=0.20$ eV 3; $\Gamma_\gamma=1.15$ eV 16 E(level): from $E_{\text{res}}=953$ keV 2 (1984Ha13) also see $E_{\text{res}}=958$ keV 1 from (1951Be13). $\Gamma$ : see (1984Ha13). Also see $\Gamma\approx 6$ keV (1951Be13). $\Gamma_\gamma$ from (1984Ha13). $\omega\gamma=1.72$ eV 17 (1984HA13).
9.88 $\times 10^3$ ?	3/2 $^+$	290 keV	$\Gamma_{\gamma 0}<0.5$ eV E(level): $\Gamma$ : from $E_{\text{res}}=1.90$ MeV (1967Pa19).
10256 I2	3/2 $^-$	433 keV	$\Gamma_{\gamma 0}=17$ eV E(level): $\Gamma$ : from $E_{\text{res}}=2.50$ MeV 2(1967Pa19).
10332 I2	5/2 $^-$	100 keV	$\Gamma_{\gamma 0}=1.0$ eV E(level): $\Gamma$ : from $E_{\text{res}}=2.62$ MeV 2 (1967Pa19). E(level): $\Gamma$ : from $E_{\text{res}}=2.80$ MeV 8 (1967Pa19). WIDTHG0*(2J+1)=10 eV.
10450? 50		$\approx 140$ keV	
10600?	7/2 $^+$	90 keV	$\Gamma_{\gamma 0}<0.2$ eV E(level): $\Gamma$ : from $E_{\text{res}}=3.04$ MeV (1967Pa19).

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 $\gamma(^{11}\text{B})$ 

$E_\gamma$	$I_\gamma$	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Comments
1293.	$\approx 1$	9271.	$5/2^+$	7978	$3/2^+$	
1985.	$\approx 0.03$	9271.	$5/2^+$	7286	$5/2^+$	
2391.	$< 1.3$	9183.	$7/2^+$	$6.792 \times 10^3$		
2440.	8.3 <i>10</i>	9183.	$7/2^+$	$6.743 \times 10^3$	$7/2^-$	
2480.	$< 0.6$	9271.	$5/2^+$	$6.792 \times 10^3$		
2529.	11.2 <i>6</i>	9271.	$5/2^+$	$6.743 \times 10^3$	$7/2^-$	
4474	4.5 <i>5</i>	8920	$5/2^-$	$4.445 \times 10^3$	$5/2^-$	
4737.	90.8 <i>40</i>	9183.	$7/2^+$	$4.445 \times 10^3$	$5/2^-$	
4826.	71.7 <i>18</i>	9271.	$5/2^+$	$4.445 \times 10^3$	$5/2^-$	
8916	95 <i>1</i>	8920	$5/2^-$	0		the branching ratio from (1965Ol03) (=95 <i>1</i> ) gives $\Gamma_{\gamma 0}=4.15$ eV 5.
9179.	0.9 <i>3</i>	9183.	$7/2^+$	0		
9269.	17.1 <i>10</i>	9271.	$5/2^+$	0		

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